BAA 06-34: DISRUPTIVE MANUFACTURING TECHNOLOGIES (DMT)

Proposer Information Pamphlet

This pamphlet provides further information on Disruptive Manufacturing Technologies (DMT), the submission, evaluation, and funding process, white papers, proposals, teaming information, and other general information.

The Defense Advanced Research Projects Agency is soliciting innovative research proposals to demonstrate disruptive manufacturing technologies aimed at reducing the cost and time for production of components, both structural and functional, for Defense systems and platforms.

BACKGROUND AND DESCRIPTION

The rate at which asymmetric threats evolve has increased the speed with which new systems and platforms must be produced and increased the need to distribute new technologies (e.g., upgraded body armor) to a larger number of troops. Ironically, at the same time, increased lethality of our modern weapon systems has resulted in a reduction of the number of large systems required to accomplish missions. This new environment places a premium on fast and affordable manufacturing processes. Furthermore, when the cost of manufacturing spare parts is taken into consideration, it becomes clear that new approaches to defense manufacturing are critically needed to guarantee the future success of the military.

To address this shortfall, this Broad Agency Announcement (BAA) is focused on disruptive manufacturing technologies that will have a pervasive impact on DoD systems and platforms, both current and future. Note that while the substitution of higher performing components (for example, ceramics for metals or new semiconductors) is an important area of research, this is NOT the purpose of this BAA.

Successful proposals to this BAA will be focused on reducing the fabrication time as well as the cost of materials and/or components that are currently used (or currently programmed for use) in existing platforms or would be used if their price was reduced. Thus, each proposal must have at least one component challenge problem that will culminate in the qualification of the manufacturing approach for existing materials/components where time, price and performance metrics exist for benchmarking.

It is anticipated that the challenge problem components will be qualified as preferred spares or as part of a spiral upgrade to the system. This requirement will ensure that all the fabrication and related finishing and nondestructive analysis tools are in place to provide quantitative benchmarks with the conventional manufacturing processes. That said technologies that are pervasive beyond the specific challenge problem will be considered more favorably.

DARPA reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this solicitation and to make awards without discussions with offerors. The Government also reserves the right to conduct discussions if the Source Selection Authority later determines them to be necessary. Proposals identified for negotiation may result in a contract, grant, cooperative agreement, or other transaction depending upon the nature of the work proposed, the required degree of interaction between parties, and other factors. Additionally, DARPA reserves the right to accept proposals in their entirety or to select only portions of proposals for award, and to award without discussions. In the event that DARPA desires to award only portions of a proposal, negotiations will be opened with that offerer.

AREAS OF INTEREST

The following list illustrates some of the possible research areas (these examples are not meant to be all inclusive). Any disruptive research topic that can be justified against the criteria found in this BAA/PIP will be acceptable.

- Raw Materials: Approaches for significantly reducing the cost of raw materials especially through a radical change in the process that changes the cost paradigm.
- <u>Tooling</u>: Approaches for rapidly defining and producing "production quality" tooling or approaches for completely eliminating tooling.
- Part Manufacturing: Approaches that reduce the cost of manufacturing, such as technologies for fabrication of composite parts without the need for an autoclave or near-net-shaped metallurgical fabrication of a high value metal such as titanium.
- <u>Precision Assembly</u>: Approaches that reduced the cost of producing precise finished parts. For example, improving the weldability of metals such as titanium, or production of alignment jigs and gages.
- Manufacturing Equipment: Approaches to (1) significantly reduce the cost of capital equipment and therefore the total cost of parts made in small lot sizes, or (2) significantly increasing the uniformity and repeatability of production, thereby enabling a mixed product stream comprising diverse processes, devices, and materials to be efficiency fabricated on high-volume manufacturing equipment. Of particular interest is manufacturing tools that enable affordable low volume manufacturing of Microsystems Components, including Micro Electromechanical Systems (MEMS), electronics, and photonics.
- <u>Photonics</u>: Approaches for significantly reducing the cost of integrating photonics into military systems. This could include approaches for dramatically reducing the packaging cost of key components, e.g., transceivers that can consume up to 90% of the cost of the final component, cabling costs, fiber optic backplanes, integrated PWB/photonic modules.

• <u>Software Producibility</u>: Software enabled products that can adapt to new environments, are critical to ensuring critical functionality and long life for complex manufacturing systems. Methodologies and tools for developing adaptive software are needed. How can adaptive features be built in at an acceptable cost? How general can these adaptive features be? How can one ensure that destructive adaptation be prevented?

The following list illustrates examples of current DARPA efforts that would qualify under this BAA in order to provide further guidance on what would be considered to be a DARPA Manufacturing Technology program:

- DARPA Initiative in Titanium
 http://www.darpa.mil/dso/thrust/matdev/titanium.htm
- Accelerated Manufacturing of Pharmaceuticals
 http://www.darpa.mil/dso/solicitations/solicit.htm
- Discovery and Exploitation of Structure in Algorithms http://www.darpa.mil/dso/thrust/math/algorithms.htm
- Wide Bandgap Semiconductor Technology http://www.darpa.mil/mto/wbg/

Thrust I - RF/Microwave/Millimeter-wave Technology http://www.darpa.mil/mto/rf/index.html

Thrust II - High Power Electronics http://www.darpa.mil/mto/hpe/index.html

- Supermolecular Photonics Engineering
 http://www.darpa.mil/mto/morph/index.html
- MEMS Exchange
 http://www.darpa.mil/mto/memsexchange/
- Antimonide Based Compound Semiconductors http://www.darpa.mil/mto/abcs/index.html

TEAMING

The goals of this program will be enhanced by a multi-disciplinary team of companies and technologists. Expertise may include materials science and engineering, machine design, process modeling, technical cost modeling, structural mechanics, nondestructive analysis as well as application specific expertise. The team may include technology companies, part fabricators, and tooling companies. Most importantly, it is critical that each research team identify which team member will serve as the Systems Integrator (SI)

and take ultimate responsibility for acceptance and implementation of successful technology. The SI will be responsible for liaison with the military acquisition command responsible for the purchase and qualification of the class of components to be demonstrated. Since team composition will ultimately determine the success of this program, a teaming website is provided to facilitate these interactions and can be found at http://www.sainc.com/DMTTeaming.

PROGRAM PHASES

This program will be conducted in phases. The first Phase will demonstrate viability and proof of concept for the proposed manufacturing process. Success will be evaluated against specific milestones proposed by the performer that capture the most critical challenges to demonstrate this viability. It is anticipated that there will be a down select after Phase I. In Phase II, proposers will demonstrate the ability to successfully operate the disruptive manufacturing technology to match the performance of existing component/part/material, while demonstrating the cost/time advantages of the new technology. Phase II will also culminate in an agreement (time/cost/responsibility) between the Department of Defense (DoD) and the SI for insertion of the new technology into production. After a successful Phase II, DARPA may cost share a Phase III to transition the insertion to a fully certified production part. However, proposals to this BAA should only cover the first two Phases.

WHITE PAPER INFORMATION

Before proposers put together a full proposal, it is highly recommended that a white paper be submitted in response to this BAA. This white paper should clearly state the uniqueness of the disruptive manufacturing idea presented in the context of existing defense manufacturing capabilities. The white paper should also describe the proposed approach and explain why it is unique. Further, the proposer should estimate the direct and/or indirect cost savings that would result from a successful project and the extent to which the project would have pervasive impact relative to number of Defense systems impacted. Key quantifiable milestones expected in the effort should be described. Also, a brief discussion of the technical expertise of the proposed principal investigator and other key team members should be provided. Finally, an estimate of the program costs and duration (in months) should be included. White papers should not be longer than 8 pages.

A website http://www.sainc.com/DMT0634 has been set up to facilitate the submission of white papers. This site will allow proposers to fill in contact information and upload a white paper document in either Word or PDF format. It provides a method by which proposers can track their submissions. White paper submissions may also be made by attachment to an e-mail sent to BAA06-34@darpa.mil (Word 97 or higher is recommended). Those offerors that are proposing efforts under Grant instruments may alternately submit white papers, i.e. pre-applications, through Grants.gov. Embedded text and Postscript are also acceptable. Note: If the website is not used, then the body of the e-mail and the attachment must include name, mailing address, phone

number, and fax number of the proposer. If this information is not contained in the body, the e-mail will be returned for inclusion of that information. If proposers choose not to use e-mail, U.S. mail (address is at end of this document) may be used. White papers and proposals will not be accepted by way of facsimile transmissions. Within two weeks of receipt of the white paper, the proposer will receive a confirmation providing a control number and both a technical and administrative point of contact. The formal recommendation about whether a full proposal is recommended will be made as soon as possible. However, the exact time for response will depend on a variety of circumstances, including the number of white papers received. Please note, this recommendation and any additional feedback provided is for the benefit of the proposer and following these recommendations is not a guarantee that the full proposal will be funded. All full proposal submissions will be evaluated regardless of the disposition of the white paper. WHITE PAPERS ARE DUE NO LATER THAN 1600 ET, Thursday August 24, 2006.

FORMAT AND CONTENT OF FULL PROPOSAL

The descriptions contained in this section are to help proposers ensure that proposals have sufficiently detailed information to be evaluated. Proposals not conforming to the instructions of this section may not, at the discretion of the Government, be evaluated. Full proposals shall consist of two volumes, technical and cost. A website http://www.sainc.com/DMT0634 has been established to facilitate the submission of full proposals electronically. This site will allow proposers to fill in contact information and upload a full proposal created with the requirements listed below in either Word or PDF format. Note: if the website is not used, please use the U.S. mail system or the BAA email account BAA06-34@darpa.mil. Those offerors that are proposing efforts under Grant instruments may alternately submit full proposals through Grants.gov. If submitting via e-mail, the body of the e-mail and the attachment must include name, mailing address, phone number, and fax number of the proposer. If this information is not contained in the body, the e-mail will be returned for inclusion of that information. If proposers choose to submit by U.S. mail, they should submit one (1) original and three (3) copies of the full proposal to the address shown at the end of this document. Proposals will not be accepted by way of facsimile transmissions. Both volumes should be included as a single document when uploading to the website.

Volume 1: Technical

The technical volume is limited to a maximum of 30 pages including all figures, references, tables, charts, cover sheet, and appendices and consists of the following sections:

- a) Executive Summary (two pages or less);
- b) Technical section that clearly describes the disruptive manufacturing technology being developed, specific metrics for the effort, the risks to achieving those metrics and approaches for mitigation of those risks. All milestones should be clearly delineated, especially the phase I milestones that are critical to demonstration of the concept or

approach. Supporting rationale for performance enhancements should be included. The pervasive impact of the proposed project for DoD Systems and System Integrator, the potential to reduce manufacturing costs and to reduce development time for DoD should be described. A Statement of Work (SOW) that summarizes critical tasks to be accomplished should be presented;

- c) Time-phased schedule-milestone chart;
- d) Summary of relevant prior work;
- e) Brief description of applicable facilities and equipment;
- f) Short resumes of key individuals.

The level of effort and specific roles and qualifications of key individuals should be included. If the team is large (greater than 3 separate entities), a management plan for coordination of the effort should also be included; and

g) Current and pending support (award title, amount, period of performance, and degree of overlap with this proposal).

Proposers are cautioned not to submit supporting material (articles, CDs, etc.) as these will not be used in evaluation of the proposal.

Volume 2: Cost.

The cost volume shall contain the following:

a) Cover sheet to include: (1) BAA number; (2) Lead organization submitting proposal; (3) Type of business (Lead organization), selected among the following categories: LARGE BUSINESS, SMALL BUSINESS, SMALL DISADVANTAGED BUSINESS, 8A, OTHER SMALL BUSINESS, EMERGING SMALL BUSINESS, VETERAN-OWNED SMALL BUSINESS, SERVICE-DISABLED VETERAN OWNED, OTHER VETERAN, WOMAN-OWNED BUSINESS, HUBZONE, JWOD PARTICIPATING NONPROFIT AGENCY, OTHER NONPROFIT, HOSPITAL, FOREIGN CONCERN OR ENTITY, DOMESTIC FIRM PERFORMING OUTSIDE U.S., HISTORICALLY BLACK COLLEGE OR UNIVERSITY (HBCU), MINORITY INSTITUTION (MI), OTHER EDUCATIONAL; (4) Contractors reference number (if any); (5) Other team members (if applicable) and type of business for each; (6) Proposal title; (7) Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available); (8) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), and electronic mail (if available); (9) Award instrument requested: cost-plus-fixed-fee (CPFF); cost-contract--no fee; cost sharing contract--no fee; or other type of procurement contract (specify), grant, cooperative agreement, or other transaction; (10) Place(s) and period(s) of performance; (11) Total proposed cost separated by basic award and option(s) (if any); (12) Name, address, and telephone

number of the proposer's cognizant Defense Contract Management Agency (DCMA) administration office or Office of Naval Research; (13) Name, address, and telephone number of the proposer's cognizant Defense Contract Audit Agency (DCAA) audit office; (14) Date proposal was prepared; (15) DUNS, TIN, CAGE CODE; and (16) All subcontractors proposal backup documentation to include items 1-15 above, as applicable and available.

- b) Detailed cost breakdown to include: (1) total program cost broken down by major cost items (direct labor, subcontracts, materials, travel, other direct costs, overhead charges, etc.), and (2) an itemization of major subcontracts (labor, travel, materials and other direct costs) and equipment purchases. Where the effort consists of multiple portions that could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each.
- c) Supporting cost and pricing information in sufficient detail to substantiate the summary cost estimates in b) above. Include a description of the method used to estimate costs and supporting documentation. Note: cost or pricing data, as defined in the Federal Acquisition Regulation (FAR) Subpart 2.101, shall be required if the proposer's proposal is for a procurement contract award of \$550,000 or greater unless the proposer requests an exception from the requirement to submit cost or pricing data. Cost or pricing data is not required if the proposer proposes an award instrument other than a procurement contract (e.g., a grant, cooperative agreement, or other transaction). The requirements for submission of cost or pricing data are specified in FAR Subpart 15.403-4 (see http://www.arnet.gov/far).

OTHER RELEVANT INFORMATION FOR PROPOSAL SUBMISSION

Success in meeting the goals of this program will be enhanced by a multi-disciplinary team. Expertise may include materials science and engineering, machine design, process modeling, technical cost modeling, structural mechanics, nondestructive analysis as well as application specific expertise. The team may include technology companies, part fabricators, and tooling companies. Most importantly, it is critical that each research team identify which team member will serve as the SI and take ultimate responsibility for acceptance and implementation of successful technology. The SI will be responsible for liaison with the military acquisition command responsible for the purchase and qualification of the class of components to be demonstrated. Since team composition will ultimately determine the success of this program, a teaming website is provided to facilitate these interactions and can be found at http://www.sainc.com/DMTTeaming.

Proposals may include, or be led by, foreign firms and/or personnel provided all export control laws and U.S. national security requirements are adhered to in the conduct of the effort and that the work relating to the foreign firm or personnel is unclassified. The onus of understanding and complying with export control rests with the proposer, not the Government.

Small Disadvantaged Businesses, Historically Black Colleges and Universities (HBCUs), and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this BAA will be set aside for Small Disadvantaged Businesses, HBCU, and MI participation due to the impracticality of reserving discrete or severable areas of this research for exclusive competition among these entities.

Awards made under this BAA are subject to the provisions of the FAR Subpart 9.5, Organizational Conflicts of Interest. Consequently, all proposers and proposed subcontractors must, therefore, affirm whether they are providing scientific, engineering and technical assistance (SETA) or similar support to any DARPA technical office(s) through an active contract or subcontract. All affirmations must state which office(s) the proposer supports, and identify the prime contract numbers. Affirmations should be furnished at the time of proposal submission. All facts relevant to the existence or potential existence of organizational conflicts of interest, as that term is defined at FAR 9.501, must be disclosed. The disclosure shall include a description of the action the proposer has taken or proposes to take to avoid, neutralize or mitigate such conflict.

Proprietary Information

All proprietary information should be marked on both the white paper and the full proposal. It is the policy of DARPA to treat all proposals as competitive information and to disclose their contents only for the purpose of evaluation. Standard proprietary disclaimers notwithstanding, proposals may be reviewed by non-Government technical experts who have signed a nondisclosure agreement with DARPA, unless the specific phrase TO BE REVIEWED BY GOVERNMENT EMPLOYEES ONLY appears on the cover sheet. In any case, personnel under exclusive contract with DARPA who have completed the appropriate nondisclosure agreements will handle the proposals for administrative purposes.

Guidance for Classified Information and Data

The Government anticipates that proposals submitted under a BAA will be unclassified. In the event that a proposer chooses to submit a classified proposal, the following information is applicable.

Proposals and white papers may contain classified information or data (up to the level of Top Secret/SCI). HOWEVER, DO NOT SEND CLASSIFIED WHITE PAPERS OR FULL PROPOSALS BY EMAIL OR VIA ONLINE SUBMISSION SYSTEMS. Proposers that intend to include classified information or data in their proposals should contact DARPA security at (571) 218-4842 (or alternatively, the point-of-contact for this BAA) for guidance and direction in advance of proposal preparation. Proposers must have existing approved capabilities (personnel and facilities) to perform research and development at the classification level they propose. Security Classification guidance on DD Form 254 will not be provided at this time since DARPA is soliciting ideas only. After reviewing the incoming proposals, if a determination is made that the award

instrument may result in access to classified information a DD Form 254 will be issued and attached as part of the award. Proposers choosing to submit a classified proposal must first receive permission from the Original Classification Authority to use their information in applying to this BAA. An applicable classification guide should be submitted to ensure that the proposal is protected appropriately. For instructions on submitting Classified White Papers or Full Proposals, contact Security & Intelligence Directorate (SID) Classification Management at (571) 218-4842.

Intellectual Property

(a) FARS/DFARS Noncommercial Items IP Restrictions: (Technical Data and Computer Software)

Proposers responding to this solicitation requesting a procurement contract to be issued under the FAR/DFARS, shall identify all noncommercial technical data, and noncommercial computer software that it plans to generate, develop, and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights, and to assert specific restrictions on those deliverables. Proposers shall follow the format under DFARS 252.227-7017 for this stated purpose. In the event that proposers do not submit the list, the Government will assume that it automatically has "unlimited rights" to all noncommercial technical data, and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data, and noncommercial computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data, and noncommercial computer software generated, developed, and/or delivered under any award instrument, then proposers should identify the data, documentation, and software in question, as subject to Government Purpose Rights (GPR). In accordance with DFARS 252.227-7013 Rights in Technical Data – Noncommercial Items, and DFARS 252.227-7014 Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation, the Government will automatically assume that any such GPR restriction is limited to a period of five (5) years in accordance with the applicable DFARS clauses, at which time the Government will acquire "unlimited rights" unless the parties agree otherwise. PROPOSERS ARE ADVISED THAT OFFERS CONTAINING RESTRICTIONS ON INTELLECTUAL PROPERTY ARE BY NATURE LESS FAVORABLE AND VALUABLE TO THE GOVERNMENT. RESTRICTIONS WILL BE CONSIDERED IN THE EVALUATION PROCESS. If no restrictions are intended, then the proposer should state "NONE".

A sample list for complying with this request is as follows:

NONCOMMERCIAL						
Technical Data	Basis for Assertion	Asserted Rights	Name of Person			
Computer Software		Category	Asserting			
To be Furnished			Restrictions			
With Restrictions						

(TZLI)	(LIST)	(TZLI)	(TZLI)
(LIST)	(LIST)		(LISI)

(b) FARS/DFARS Commercial Items IP Restrictions: (Technical Data and Computer Software)

Proposers responding to this solicitation requesting a procurement contract to be issued under the FAR/DFARS, shall identify all commercial technical data, and commercial computer software that may be embedded in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government's use of such commercial technical data and/or commercial computer software. In the event that proposers do not submit the list, the Government will assume that there are no restrictions on the Government's use of such commercial items. PROPOSERS ARE ADVISED THAT OFFERS CONTAINING RESTRICTIONS ON TINTELLECTUAL PROPERTY ARE BY NATURE LESS FAVORABLE AND VALUABLE TO THE GOVERNMENT. RESTRICTIONS WILL BE CONSIDERED IN THE EVALUATION PROCESS. If no restrictions are intended, then the proposer should state "NONE".

A sample list for complying with this request is as follows:

COMMERCIAL					
Technical Data	Basis for Assertion	Asserted Rights	Name of Person		
Computer Software		Category	Asserting		
To be Furnished			Restrictions		
With Restrictions					
(LIST)	(LIST)	(LIST)	(LIST)		

(c) Non-FARS/DFARS IP restrictions: (Technical Data and Computer Software)

Proposers responding to this solicitation requesting a Grant, Cooperative Agreement, Technology Investment Agreement, or Other Transactions for Prototype shall follow the applicable rules and regulations governing these various award instruments, but in all cases should appropriately identify any potential restrictions on the Governments use of any Intellectual Property contemplated under those award instruments in question. This includes both Noncommercial Items and Commercial Items. Although not required, proposers may use a format similar to that described in Paragraphs 3.4.1 and 3.4.2 herein. PROPOSERS ARE ADVISED THAT OFFERS CONTAINING RESTRICTIONS ON INTELLECTUAL PROPERTY ARE BY NATURE LESS FAVORABLE AND VALUABLE TO THE GOVERNMENT. RESTRICTIONS WILL BE CONSIDERED IN THE EVALUATION PROCESS. If no restrictions are intended, then the proposer should state "NONE".

Patents, Licenses, and Intellectual Property

Please include documentation proving your ownership of or possession of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under your proposal for the DARPA program. If a

patent application has been filed for an invention that your proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, you may provide only the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: 1) a representation that you own the invention, or 2) proof of possession of appropriate licensing rights in the invention. Please also provide a good faith representation that you either own or possess appropriate licensing rights to all other intellectual property that will be utilized under your proposal for the DARPA program. If you are unable to make such a representation concerning non-patent related intellectual property, please provide a listing of the intellectual property to which you do not have needed rights, and provide a detailed explanation concerning how and when you plan to obtain these rights.

Research Involving Human Use

Proposals selected for funding are required to comply with provisions of the Common Rule (32 CFR 219) on the protection of human subjects in research (http://www.dtic.mil/biosys/downloads/32cfr219.pdf) and the DoD Directive 3216.2 (http://www.dtic.mil/whs/directives/corres/html2/d32162x.htm). All proposals that involve the use of human subjects are required to include documentation of their ability to follow Federal guidelines for the protection of human subjects. This includes, but is not limited to, protocol approval mechanisms, approved Institutional Review Boards (IRB), and Federal Wide Assurances. These requirements are based on expected human use issues sometime during the entire length of the proposed effort.

For proposals involving greater than minimal risk to human subjects within the first year of the project, performers must provide evidence of protocol submission to a federally approved IRB at the time of final proposal submission to DARPA. For proposals that are forecasted to involve greater than minimal risk after the first year, a discussion on how and when the proposer will comply with submission to a federally approved IRB needs to be provided in the submission. More information on applicable Federal regulations can be found at the Department of Health and Human Services office of Human Research Protections website (http://www.dhhs.gov/ohrp/).

EVALUATION CRITERIA

Evaluation of proposals will be accomplished through a technical review of each proposal using the following criteria, listed in order of importance:

Scientific and Technical Merit of the Proposal

Proposers must demonstrate that the disruptive manufacturing technology that they proposed is innovative and unique, that they have an understanding of critical technical issues and risks related to the success of that technology and that they have a plan for mitigation of those risks. Successful proposals will also demonstrate a full understanding of the current processes that are to be replaced and provide detailed technical justification of why the proposed technology will indeed improve the process. Proposers should

clearly and quantitatively recommend and justify technical milestones for both Phases I and II that are on the critical path to successful insertion of the technology.

Value to Defense

Proposers must demonstrate the potential of successful research to radically change the cost structure of the manufacture of a critical material/part/component currently used in a DoD system. Proposers must also quantitatively justify any claims of pervasive value of this technology to DoD in general. Proposers must demonstrate they understand the path to insertion of this technology into existing and future DoD systems. Efforts with shorter timeframes to insertion will be considered to have increased value to Defense.

Capability of the Personnel and Facilities to Perform the Proposed Effort

Proposers must demonstrate that their team has the necessary background and experience to perform this project. This includes the identification of Systems Integrator and the potential role on the team of the ultimate Service/industry transition partner. The balance of the technical capabilities of the team must match that required in the program plan. The relevant experience of key personnel must be sufficient to provide confidence that the proposers can accomplish their objectives. Proposers must demonstrate that the combined facilities of the team are sufficient to accomplish the objectives of the proposal.

Cost Realism

Costs of the proposal must be reasonable for the technical work described and provide a high value to the Government.

ADMINISTRATION

Mailing Address for Submission of White Papers or Full Proposals (Except Classified Proposals):

DARPA/DSO, ATTN: BAA06-34 3701 North Fairfax Drive Arlington, VA 22203-1714

Those offerors that are proposing efforts under Grant instruments may alternately submit white papers, i.e. pre-applications, and full proposals through Grants.gov.

Web Address for White Paper and Full Proposal Submission: http://www.sainc.com/DMT0634

Fax Number and Email Address for Administrative Questions: Fax: (571) 218-4553 (Addressed to: DARPA/DSO, BAA06-34)

Electronic Mail: BAA06-34@darpa.mil

This announcement may be retrieved via the WWW at URL http://www.darpa.mil/baa/. PROPOSALS ARE DUE NO LATTER THAN 1600 ET, Thursday, October 19, 2006

Web address for Full Proposal Submission: http://www.sainc.com/DMT0634

Points of Contact

Lee Badger, Information Processing Technology Office, Phone - (571) 218-4327, Fax - (703) 248-1879, Email: <u>lee.badger@darpa.mil</u>

William Coblenz, Defense Sciences Office, Phone - (571) 218-4647, Fax - (703) 248-1852, Email: william.coblenz@darpa.mil

John Evans, Microsystems Technology Office, Phone - (571) 218-4524, Fax - (703) 248-1808, Email: john.evans@darpa.mil

Douglas Kirkpatrick, Advanced Technology Office, Phone – (703) 696-4762, Fax – (703) 516-8788, Email: douglas.kirkpatrick@darpa.mil

Brian Leininger, Information Exploitation Office. Phone - (571) 218 4528, Fax – (703) 248-1820, Email: brian.leininger@darpa.mil

Mitchell Zakin, Special Projects Office, Phone - (703) 248-1509, Fax - (703) 807-1743, Email: mitchell.zakin@darpa.mil